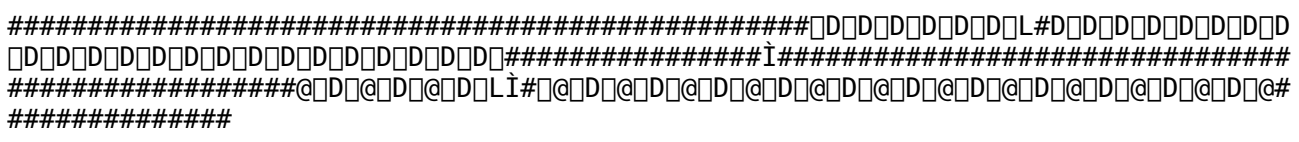

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Qÿÿÿ####ÿÿ#####ÿ□#ÿÿd#########d#2#######ë###This course provides an overview of the life cycle for developing/maintaining a software-intensive system based on such standards as the MIL-STD-498 Software Development and Documentation Standard and commercial standards replacing it..

##ÿ□#ÿÿd#########d#2#######3##□##ü÷##þ*#ÿÿ####ÿÿ#####ÿ□#ÿÿd#########d#2#######□###1. Understand the purpose of life cycle standards such as MIL-STD-498 (and replacement standards) and the related DoD 5000 series policies#

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Õ#ÿÿ####ÿÿ#####ÿ□#ÿÿd#########d#2#######\###2. Review the effect of the
policies and standards on DLA□s systems development life cycle.

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#####6###GRAND DESIGN - a □once through, do each step once□ strategy.

Simplistically: determine user needs, define requirements, design the system, implement the system, test, fix, and deliver.INCREMENTAL - determines user needs and defines the system requirements, then performs the rest of the development in a sequence of builds.EVOLUTIONARY - also develops system in builds, but differs from Incremental in acknowledging that the user need is not fully understood and all requirements cannot be defined up front, then are refined in each succeeding build.

###ÿÿ####@ÿ□#ÿÿd#########d#2#######¾### Requirements are not well understood System too large to do all at once Rapid changes in mission technology anticipated--may change the requirements Limited staff or budget available now

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###ÿÿ####Aÿ#ÿÿd#########d#2#######¤### Requirements are not well understood
User prefers all capabilities at first delivery Rapid changes in mission
technology anticipated--may change the requirements
```

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###ÿÿ####Aÿ□#ÿÿd#########d#2#######b### User prefers all capabilities at first
delivery User prefers to phase out old system all at once
```

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###ÿÿ####Aÿ□#ÿÿd#########d#2#######j### Early capability is needed System breaks
naturally into increments Funding/staffing will be incremental
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###ÿÿ####Aÿ□#ÿÿd#########d#2#######È### Early capability is needed System breaks naturally into increments Funding/staffing will be incremental User feedback and monitoring of technology changes is needed to understand full requirements

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      N#ÿÿ####ÿÿ####Aÿ□#ÿÿd#########d############# Improve compatibility with
non-waterfall development methods Decrease dependence on formal reviews and
audits Decrease emphasis on preparing hard-copy documents Improve compatibility
with CASE tools Clarify distinction between requirements and design#
```

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ÿÿd#########d#########□### Major activities in MIL-STD-498 correspond to many
project-level activities in the Capability Maturity Model (CMM) Levels 2 & 3##
Both tell what, not how

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There are 19 Major MIL-STD-498 activitiesSome of these are:1. Project Planning & Oversight#2. Establishing a software development environment#5. Software Requirements analysis#6. Software Design#14. Software configuration management#15. Software quality assurance#18. Joint technical and management reviews#19. Other activities#   a. Risk management#   b. Security and privacy#   c. Subcontractor management

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·#ÿÿ####ÿÿ####Aÿ□#ÿÿd#########d#########ª###PLANS#   SDP   S/W Development Plan#   SIP S/W Installation Plan#   STrP S/W Transition Plan
CONCEPT/REQUIREMENTS#   OCD   Operational Concept Description#   SSS   System/Subsystem Specification#   SRS   S/W Requirements Specification#
IRS   Interface Requirements SpecificationDESIGN#   SSDD   System/Subsystem Design Description#   SDD   S/W Design Description #   IDD   Interface Design Description #   DBDD   Database Design Description

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.÷åûÚ c#ÿÿ####ÿÿ####Aÿ□#ÿÿd#########d#########`###TEST#   STP    S/W Test Plan#
STD   S/W Test Description#   STR   S/W Test ReportUSER/OPERATOR#   SUM S/W User
Manual#   SIOM    S/W Input/Output Manual#   SCOM     S/W Center Operator Manual#
COM   Computer Operator ManualSUPPORT#   SVD   S/W Version Description#   SPS
      S/W Product Specification#   FSM   Firmware Support Manual      #   CPM
      Computer Programming Manual
```

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System/software requirements must be traced through each phase of the life cycle (from requirements development through test) Backward traceability to the SSS is mandatory Forward requirements traceability from the SSS is optional (expensive, but valuable)

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More frequent, smaller, more limited in scope GOAL: To find and fix problems through informal, conversational, technical communication between the acquirer organization and the development organization using the natural work products of the development effort. Aligns with DoD 5000 Policy□s Integrated Product Team (IPT) approach

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□#ÿÿ####ÿÿ####Aÿ□#ÿÿd#########d#########□###Qualification methods to ensure that requirements have been met (SSS Section 4): Demonstration Test Analysis Inspection Special qualification methods

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